



US009510517B2

(12) **United States Patent**
Gatten

(10) **Patent No.:** **US 9,510,517 B2**

(45) **Date of Patent:** **Dec. 6, 2016**

- (54) **PNEUMATICALLY POWERED POLE SAW**
- (71) Applicant: **Ronald Alan Gatten**, Pleasanton, CA (US)
- (72) Inventor: **Ronald Alan Gatten**, Pleasanton, CA (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/605,479**
 (22) Filed: **Jan. 26, 2015**

(65) **Prior Publication Data**
 US 2015/0135543 A1 May 21, 2015

Related U.S. Application Data
 (63) Continuation-in-part of application No. 13/448,340, filed on Apr. 16, 2012, now Pat. No. 8,939,052, which is a continuation-in-part of application No. 12/265,795, filed on Nov. 6, 2008, now Pat. No. (Continued)

(51) **Int. Cl.**
A01G 3/08 (2006.01)
F16K 31/124 (2006.01)
B23D 51/18 (2006.01)
B23D 61/12 (2006.01)

(52) **U.S. Cl.**
 CPC **A01G 3/085** (2013.01); **B23D 51/18** (2013.01); **B23D 61/123** (2013.01); **F16K 31/1245** (2013.01); **Y10T 83/04** (2015.04); **Y10T 83/8785** (2015.04)

(58) **Field of Classification Search**
 CPC **A01G 3/085**; **B23D 61/123**; **B23D 51/18**; **F16K 31/1245**; **Y10T 83/04**; **Y10T 83/8785**
 USPC **83/639.1**
 See application file for complete search history.

- (56) **References Cited**
- U.S. PATENT DOCUMENTS
- | | | | | | |
|---------------|---------|--------------|-------|--------------|------------|
| 1,347,444 A * | 7/1920 | Christiansen | | F01B 17/00 | 173/152 |
| 1,556,061 A * | 10/1925 | Ball | | B27B 11/00 | 83/756 |
| 1,704,641 A | 3/1929 | Weed | | | |
| 2,097,692 A * | 11/1937 | Fiegel | | B21D 53/10 | 29/898.054 |
| 2,735,458 A | 2/1956 | Buchmann | | | |
| 3,149,537 A * | 9/1964 | Fink | | F15B 15/1409 | 137/625.69 |

(Continued)

FOREIGN PATENT DOCUMENTS

CN	201905066 U	7/2011
RU	2046698 C1	10/1995

(Continued)

OTHER PUBLICATIONS

Print out from <http://www.mytoolstore/astro.astmat02.html> dated Oct. 8, 2007 (4 pages).

(Continued)

Primary Examiner — Sean Michalski

(57) **ABSTRACT**

A pneumatic valve assembly with a trigger for switching the pneumatic valve assembly between two or more valve operation modes is disclosed herein. The valve operational modes are determined by selection of fluid conduits by a trigger valve assembly of the pneumatic valve assembly which interconnects fluid conduits to a main valve, pilot valves and a pneumatic cylinder of a fluid powered pole saw and wherein a piston located in the pneumatic cylinder is mechanically coupled to a cutting blade of the pole saw and the trigger is operatively coupled to the trigger valve assembly.

8 Claims, 33 Drawing Sheets

